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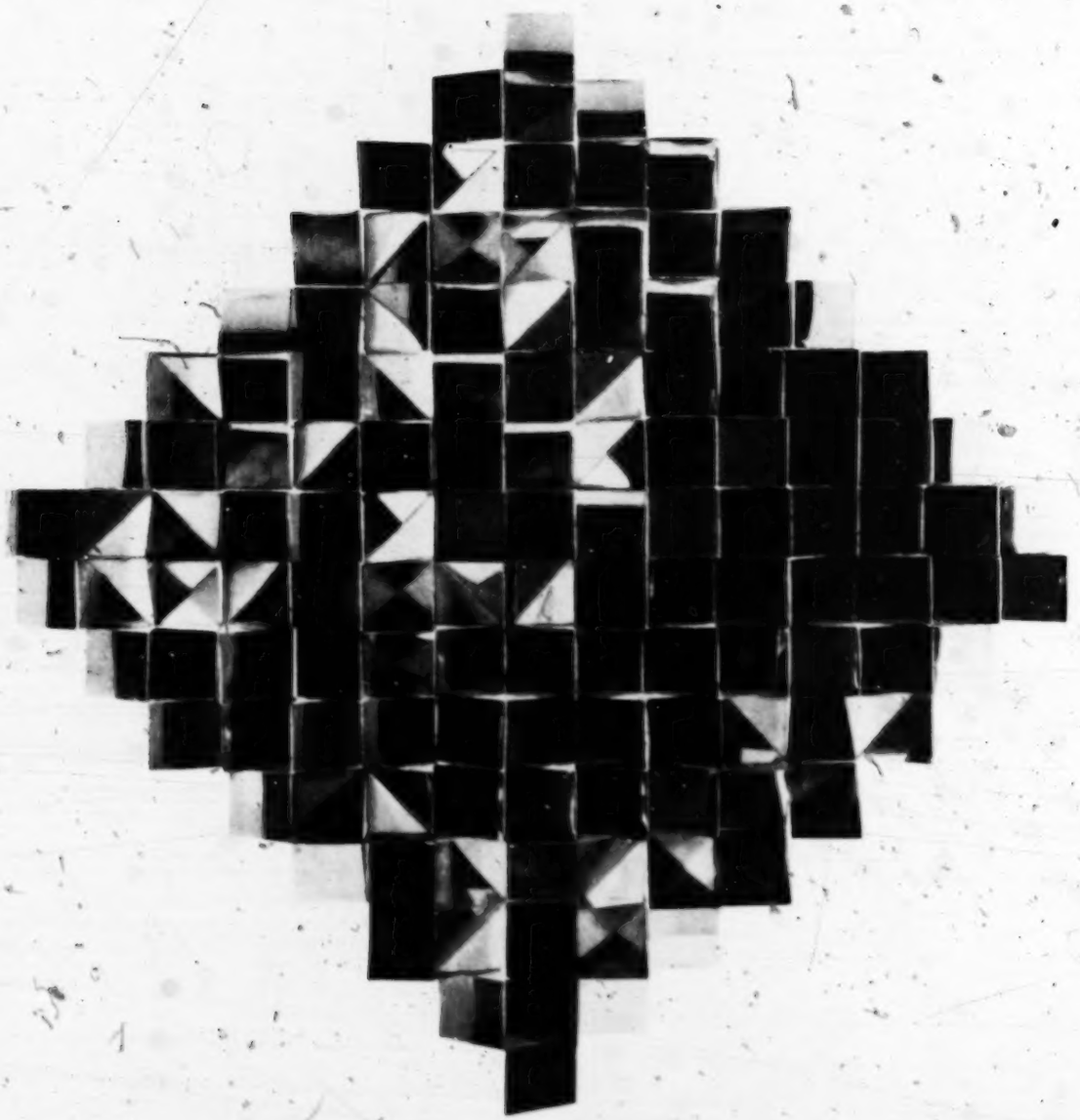
unit series progression

an exhibition of constructions



Foreword

It has always been part of our policy at the Arts Council Gallery in Cambridge to show different aspects of the contemporary art scene. In July last year the 'Chromatic Sculpture' exhibition illustrated recent developments in British sculpture, and in November 'In Motion' presented various ideas in kinetic art. This time, the work of thirteen artists shows certain aspects of constructions.

We are most grateful to all the artists, also the Axiom and Kasmin galleries, for kindly lending examples of work, especially at such short notice. We would also like to thank those who have helped with suggestions and advice in the preparation of the exhibition.

January 1967 G.W.

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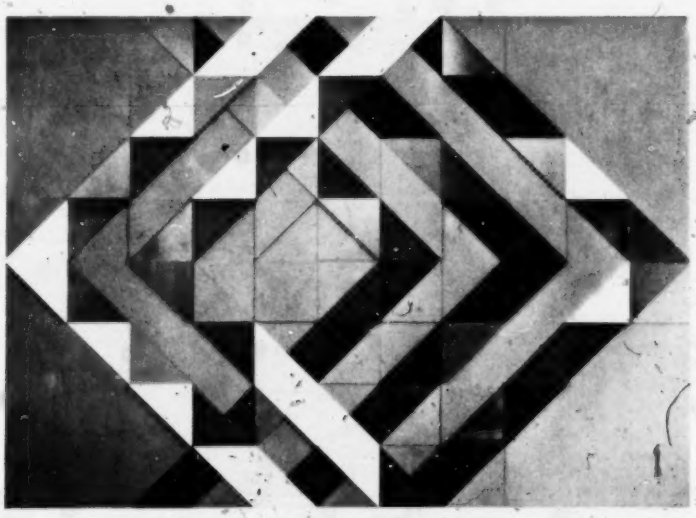

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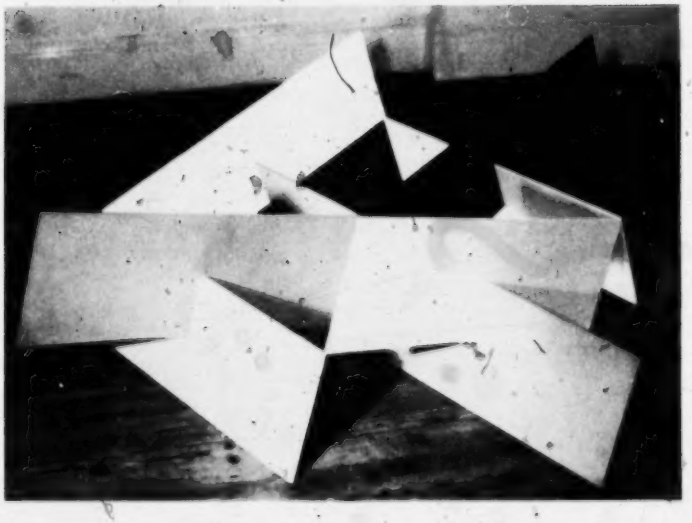

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Introduction

All the artists in this exhibition are makers of constructions, and in all the exhibits may be found to a greater or lesser degree evidence of a preoccupation with mathematics.

A construction is basically something that is 'built up'. Although an artist's thinking and his knowledge of form is dependent on the visual experience of his surroundings, a construction is not a translation or a representation of any real object or situation. It is not mimetic.

When Cézanne began his pictorial analysis of subject matter, defining nature in terms of the cylinder, the sphere and the cone, he was searching for the fundamentals beyond surface reality. It was this exploration which prompted the development of ideas which led eventually to the principles underlying constructions today. In Cubism, Picasso and Braque introduced a new conception of pictorial space, in which objects were broken down into related component parts. But by 1912, when Kandinsky published his 'Concerning the Spiritual in Art', he had finally rejected the idea of mimetic art as being too specific and therefore misleading. Instead he turned for the first time to total abstraction, in which there is no direct reference to reality. Shortly afterwards Mondriaan reached the same point after a series of tree studies in which the subject matter was progressively abstracted to a final composition of horizontal and vertical lines. These lines remained the basic components of his most important paintings until his death in 1944.

Parallel to these developments were those of the Russian Constructivists in Moscow in the years following the Bolshevik Revolution, notably Tatlin, Lissitzky, Pevsner and Gabo. These last two published in 1920 a manifesto renouncing the use of colour, mass and volume as misleading, in favour of tone, line and depth, and emphasizing the static and kinetic rhythms inherent in objects.

Appreciating the significance of the Constructivist conceptions, and those of Mondriaan, which he felt had been taken to their logical conclusion within the limits of the two-dimensional picture plane, the American Biederman attempted in the late 'thirties a synthesis and extension of these ideas. This led to the introduction of planes perpendicular to the picture surface, which allowed the orthogonal system to be expounded in three dimensions, hence to a form of the relief construction. His book 'Art as the Evolution of Visual Knowledge' proved to be an important starting point for many constructionists, including several of those in this exhibition.

But throughout the ideas of all these later artists is the rejection of representation and the essentially private language of romanticism or expressionism – in short, of all that is ephemeral. They tried instead to establish a language that is non-referential, not limited to the particular: to construct objects that have themselves a specific existence and meaning, that are universal, that are concrete.

This attempt leads therefore to a search for an objective framework as a means of reference, which sometimes, notably in the British Constructionists, has implied a form of mathematics. This is not to say that mathematics is a preordained solution that then supersedes man's effort to express himself through art. Neither is it right to object that mathematics and art are mutually exclusive. Both are man-made conceptions, conceived in an attempt to explain his phenomena. The one attempts to do so by ordered logic; the other by subjective intuition. Rather, they represent opposite poles of thought in which the present consideration shares common ground.

Mathematics has long been accepted as an essential factor in the context of architecture and music, yet strangely not in art. True, both architects and composers must ultimately conform to structural principles, but that does not satisfactorily explain the aesthetic achievement of John Woods' eighteenth-century Circus at Bath, Mies van der Rohe's Lake Shore Drive apartments in Chicago, or the musical compositions of Bach or Webern. In art geometry has frequently been the basis of composition, certainly back to the Renaissance, and perspective is after all pure projective geometry. But only recently has geometry been elevated from the means of a composition to the theme. It does not however thereby become the total content of the object – or if it does the object is no longer a work of art. It is allied to the artist's intuition, providing a rationale, or as Ernest says 'a visual analogue for some abstract notion'.

In this exhibition Ernest, Hill, Kenneth and Mary Martin, were all members of the Constructionist movement in Britain during the 1950s, with Pasmore and Gilbert who have since moved further afield. The movement proclaimed no common manifesto as such, but they were the first group to develop Biederman's ideas, and have since revealed in their work a strong preoccupation with mathematics. Several of the younger artists in this exhibition have studied under them, and two, Pope and Law, also worked in Holland under the guidance of the Dutch synthesist, Joost Baljeu, editor of the magazine 'Structure'.

Amongst the most direct ideas illustrated in this exhibition, are those of d'Orey. Taking a simple 'X' unit built up of differently coloured plates, he then constructs various systems exploring the poten-

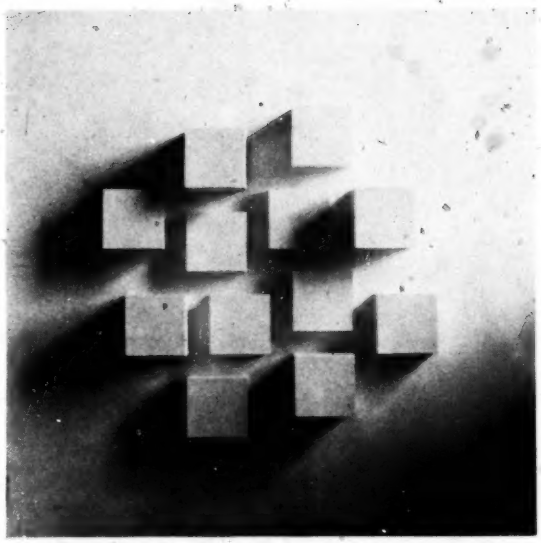
tialities and limitations of each unit system. Similar ideas may be seen in Tebby's work, but whereas d'Orey decides on the relative combinations of units himself, in Tebby's 'Moving painting III' (no 33) the decision is partially left to the spectator. In Mary Martin's 'Compound rhythms with blue' (no 22) the unit is a square, set at 45° to the picture plane, capable of four positions. Using this within a grid structure, the reflective surfaces produce complex patterns and rhythms.

An extension of the unit theme is shown in works by Jones and Lowe, where sets of units are arranged in progressive shifts around a regular interval. This is shown clearly by Lowe and is evident in Jones though here secondary axes are introduced and there is a greater emphasis on mass and volume. Wise, and Law too in his later examples, emphasize the spatiality of their reliefs although the overall composition is still largely complementary or symmetrical.

The mosaic reliefs of Ernest, who is quoted above, evolve from visual analogues of a mathematical concept, which become increasingly remote. Hill too begins with a mathematical theme and in the two later examples uses square angled units as a basic component. The three objects by Kenneth Martin, which at first sight seem disorderly arrangements of separate parts, are in fact the result of increasingly complex numerical series, which are not absolute but allow flexibility.

In contrast to the last three mentioned, who may be said to use mathematical themes as a starting point, are those who begin with no preconception yet arrive intuitively at a geometric or arithmetic order. Lowe, given his related components, arrives at the final organization intuitively, although he is constantly aware of rhythmic progressions emerging and feels logically justified if they do. The same may be said of Spencer though there is no obligation for the final statement to be defined in an ordered sequence. On the other hand Pope, although motivated to some extent by mathematical disciplines, speaks of the 'intuitive geometry of sight', and his work emphasizes this aspect which is also evident in Spencer and to a lesser degree in nearly everyone else. But could this not be interpreted as an intuitive affirmation of that which is deduced logically?

Illustrating a more complex extension of projective geometry are the constructions of Carder. The three examples here originate from considerations of symmetry, perspective and the tesseract – that is the four-dimensional equivalent of a cube. But the final object is freely manipulated to such an extent that the original starting point is barely discernible, and it might almost be said that the wheel



has turned full circle, that geometry has reverted once again from the theme to the means.

Each artist in this exhibition illustrates a different interpretation of the role of mathematics in his work. Yet all are concerned with one thing in common, the interaction of the intuitive with the rational – the entasis of a Greek column.

Hugh Evans

Catalogue note

All dimensions in inches, height before width. All works lent by the artists except where otherwise stated.

Malcolm Carder
Born 1936. Studied architecture, painting and sculpture at Kingston School of Art. Group exhibitions include Penwith Gallery St Ives 1964, and 'Constructions' Axiom 1966. Represented in Tate Gallery, Contemporary Art Society and Middlesbrough Art Gallery.

1 Development of a Tesseract 1966
perspex 36x36
lent by the Axiom Gallery

2 Drawing in Space 1966
perspex 24x24
lent by the Axiom Gallery

3 Threepoint Invention 1966
perspex 48x36
lent by the Axiom Gallery

John Ernest
Born USA 1922. Studied in New York and Philadelphia 1936–41, and at St Martin's School 1952–6. One-man shows at the ICA and Belfast University 1964. Group exhibitions include Kunstgewerbermuseum Zurich 1962, 'Gulbenkian Decade' 1964 and 'British Sculpture of the 60s' 1965 both at the Tate Gallery, also Stedelijk Museum Amsterdam and 'Constructions' Axiom 1966. Represented in the Arts Council Collection.

4 Mosaic Relief V 1966
aluminium and cellulose on hardboard 36x36
lent by the Axiom Gallery

5 Mosaic Relief VI 1966
aluminium, perspex and cellulose on hardboard 48x56
lent by the Axiom Gallery

Anthony Hill
Born London 1930. One-man shows ICA 1958 and Kasmin 1966. Group exhibitions include Whitechapel 1956, 'Construction England' Drian 1961, 'Gulbenkian Decade' 1964 and 'British Sculpture of the 60s' 1965 both at the Tate; also abroad at Zurich 1960, Paris 1961, USA and Amsterdam 1962, Buffalo 1964 and Tokyo 1965. Represented in Tate Gallery, British Council, Arts Council and Kröller-Müller Museum collections.

6 Relief 1957
copper, aluminium and perspex 18x18
Arts Council Collection

7 Relief Construction G 2 1966
perspex, steel and aluminium 30x30
Arts Council Collection

8 Relief Construction 1963–4
aluminium, perspex and vinyl 18x26
lent by the Kasmin Gallery

Colin Jones
Born 1934. Studied at Goldsmiths' College. Group exhibitions include 'Geometric Environment' AIA 1962, '+ – Inventions' (with Peter Lowe) AIA 1963; 'Construction England' Arts Council touring exhibition 1963; 'Constructions' Axiom, 'Structure 66' Cardiff and 'Relief Structures' ICA 1966. Now teaches at Leicester College.

9 Relief Structure No 2 1965
wood, hardboard and polyurethane 48x48

10 Relief Structure No 3 1965
wood, hardboard and polyurethane 36x36

11 Relief Structure No 3 1966
wood, hardboard and polyurethane 36x36

John Law
Born London 1941. Studied at Corsham under John Ernest and later at The Hague under Joost Baljeu. Designed sets for the Nederlands Dans Theatre and is now teaching at Leeds College of Art.

12 Relief A 1 1966
perspex 15x15

13 Relief F 1 1966
wood 20x20

14 Relief F 2 1966
wood 27x27

Peter Lowe
Born London 1938. Studied at Goldsmiths' College under the Martins. First one-man show Drian Gallery 1963. Group exhibitions include 'Geometric Environment' AIA 1962, '+ – Inventions' (with Colin Jones) AIA 1963, 'Construction England' Arts Council touring exhibition 1963, 'Constructions' Axiom and 'Relief Structures' ICA 1966.

15 Relief Structure No 1 1966
perspex 33x23

16 Relief Structure No 3 1966
perspex 37x37

17 Relief Structure No 4 1966
perspex 40x22

Kenneth Martin
Born Sheffield 1905. Participated in group activities of abstract, constructed and kinetic art from 1950s onwards. Group exhibitions include Whitechapel 1956, 'International Movement' Amsterdam and Stockholm 1961, 'British Constructivist Art' USA 1962, 'Gulbenkian Decade' 1964 and 'British Sculpture of the 60s' 1965 both at the Tate; Tokyo, Tel Aviv and Zagreb 1965.

18 Linear Construction 1964
brass and wood 11h
Arts Council Collection

19 Oscillation A 1964
brass 11h
Arts Council Collection

20 Tunnel and Cylinder 1965
brass and wood 15h
Arts Council Collection

Mary Martin
Born Folkestone 1907. Studied Goldsmiths' College and Royal College of Art. Participated in first post-war manifestations of abstract art and construction. One-man shows at Molton and Lords Galleries 1964. Group exhibitions include 'British Sculpture in the 60s' 1965 at the Tate Gallery and others in Switzerland, Holland, Germany and USA. Commissions include SS *Oriana* and IUA Congress Building. Represented in Tate Gallery, Ferens Hull, Arts Council, Gulbenkian and Stuyvesant Foundations.

21 Spiral Movement 1954
painted wood 24x24
Arts Council Collection

22 Compound Rhythms with Blue 1966
stainless steel, formica and painted wood 42x42
Arts Council Collection

Waldemar d'Orey
Born Lisbon 1940. Studied architecture and later sculpture at Central and St Martin's Schools, where he was awarded a Gulbenkian Scholarship. First one-man show at Axiom 1966. Group shows include Young Contemporaries 1961, '62 and '63, London Group 1962 and 'New Sculpture' at Museum of Modern Art Oxford 1966.

23 X I 1966
painted aluminium units 36x12
lent by the Axiom Gallery

24 X IV 1966
painted aluminium units 36x12
lent by the Axiom Gallery

Terence Pope
Born 1941. Studied at Corsham and was awarded Netherlands Government Scholarship 1962–3. Group exhibitions include Midland Group Nottingham 1962, Penwith Society Cornwall 1963, '64 and '65, 'Constructions' Axiom 1966. Represented in Arts Council and Cornwall Education Committee collections.

25 Overlap Construction No 2 1965
perspex and darvic 21x17x10
lent by the Axiom Gallery

26 Space Ring Construction 1966
perspex, silver steel and pvc 48x36x24
lent by the Axiom Gallery

27 Space Construct 1966–7
perspex, stainless steel and formica 18x18x12
lent by the Axiom Gallery

Jean Spencer
Born 1942. Studied Corsham. First one-man show Bear Lane Oxford 1965. Group shows include AIA 1964 and 65, and 'Constructions' Axiom 1966. Represented in Arts Council and Sussex University Collections.

28 Construction 1966 April 1
plywood and pva 36x36

29 Construction 1966 April 2
plywood and pva 36x36

30 Construction 1967 January
plywood and pva

Susan Tebby
Born Wakefield 1944. Studied at Goldsmiths' College under Kenneth Martin. Now postgraduate of Chelsea School. Group exhibitions include Sculpture 1965 at the AIA Gallery.

31 Relief No III 1966
emulsion on wood 39x37x3

32 Relief No VI 1966
acrylic on wood 37x37x2

33 Moving Painting III 1966
perspex and wood 6x20x2

Gillian Wise
Born Ilford 1936. Studied at Wimbledon School of Art. Participated in the British Constructionist Group since 1959 and has shown in a number of mixed exhibitions usually constructive in nature. Group exhibitions include 'British Sculpture of the 60s' Tate Gallery and Tokyo Biennale 1965. Represented in Arts Council, British Council, Contemporary Art Society and Tate Gallery collections.

34 4-part Construction in Low Relief 1964
plastics and metal 24x25

35 4-part Construction in Deep Relief 1964
plastics and metal 22x22x12

36 2-part Construction on 3 Planes 1965
plastics and metal 18x12

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